Electronic Resources: Are Basic Criteria for the Selection of Materials Changing?

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ABSTRACT

ELECTRONIC RESOURCES ARE REVOLUTIONIZING academic libraries. Many librarians believe that these resources have changed the principles of selection radically; some believe that they will virtually eliminate selection. Although it is true that the art of selection is undergoing profound change, the selection of materials is still crucial for libraries. The four basic criteria for selection—quality, library relevancy, aesthetic and technical aspects, and cost—remain the same in the electronic era of information. What they mean and how they are used has changed. But even quality and cost, the two most controversial criteria, carry great importance for the responsible selection of electronic resources.

INTRODUCTION

It is a truism often repeated that collection development is turning into collection management and that the librarian will increasingly be the interpreter of information, not its selector. To the degree that selection takes place, it is believed that it will be on a grand macro scale and not in the selection of individual materials. This denigration of the importance of selection precedes the electronic age; librarians versed in management principles have argued the primacy of collection development policies over the importance of studied purchasing decisions for many years. As the number and importance of electronic resources has increased, as vendors have aggregated large collections of full-text journals, and as consortia, states, and even multistate entities have worked deals for huge databases

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such as LEXIS-NEXIS Academic Universe, selection decisions increasingly have escaped individual librarians. Although librarians as a group may exert influence on the contents of electronic databases, most often individual librarians cannot shape the contents of an electronic product for their own constituencies.

If electronic resources are in many cases taking decisions regarding the choice of individual titles away from collection development librarians, they are at the same time opening up a new array of choices that make selection decisions as difficult and the stakes as high as they ever have been. Information providers' creative marketing strategies have selectors deliberating over the products' prices. Selectors wonder if the products offer nonduplicative information, if they will last as products, and if their often attractive initial prices will remain stable. They are concerned that information dearly purchased will entirely disappear for their libraries if they no longer can or will pay the price or if the seller ceases to exist.

It is one matter to list the general concerns facing the decision-maker who chooses electronic resources today. Among others, they are price, consortial discounts, search engines, accessibility, content, current usefulness, and lasting benefit. It is quite another matter to see the interplay of these and other concerns as vendors attempt to create appeal for their products and services. Some offerings provide such good deals that they can hardly be refused. Some are initially wonderful opportunities but give pause over time. Some are excellent agreements for some participants and mediocre ones for others. And occasionally a vendor provides an offering of questionable merit that becomes creditable over time.

Cases

TexShare

Georgia (GALILEO), Ohio (OhioLink), and Texas (TexShare), along with many other states, have built statewide networks of electronic resources with the help of funds from their legislatures. In the best of cases, these efforts combine state funding with volume discounts from vendors to provide products of high quality and usefulness to libraries in the states at big discounts or even free. In other cases, libraries must make decisions on products with modest discounts offered through their state networks.

Two of TexShare's first offerings were Web versions of *ABI/Inform* and *Periodical Abstracts.* My university, Southern Methodist University (SMU), already subscribed to competing services, but between the quantity discount and the state funding, the prices were only a little more than 10 percent of what had been offered us for direct access. SMU subscribed. Although there was much duplication between the new and existing services, each offered considerable material that the other did not. For over a year, librarians at SMU questioned the decision to subscribe because of

the poor response time through TexShare. But TexShare was supposed to offer superior, not inferior, response time because of its physical proximity to SMU (200 miles). Improvements were made, and eventually the response time did, indeed, become superior.

As funding from the Texas legislature has proved finite, discounts on new products offered on TexShare normally are simple quantity discounts provided by vendors. Some Texas academic libraries declined to purchase even the heavily discounted *ABI/Inform* and *Periodical Abstracts.* As many states provide statewide opportunities for libraries, increasingly selectors will have to reject tempting new electronic products or they will lose money for other purchases.

SMU's experience with TexShare offers a curious cautionary lesson: poor computer connections and response time can virtually eliminate the desirability of a product, but initially poor response time can sometimes be corrected. Selectors must consider the present capabilities of a service provider, and they must also anticipate the future.

IDEAL (Academic Press)

Academic Press offers its 174 scholarly journals electronically through IDEAL. In late 1998, 839 institutions with approximately 6.5 million authorized users had joined IDEAL through consortia. Their offer is complicated. For electronic access, each member of the consortium is charged 94 percent of the cost of their print subscriptions. If they wish to continue print subscriptions, they pay only 25 percent of the print cost. The total cost for electronic and print is, therefore, 119 percent.

The attractive part of the deal is that each institution gains access to all of the titles subscribed to by all of the institutions in its consortium. The Texas Independent College and University Libraries (TICUL) joined IDEAL in 1997. In all, members of TICUL subscribed to 119 Academic Press journals. One small member of TICUL subscribed to five journals at a total cost of $1,650. If they kept all of their print subscriptions, they would have had a total charge of $1,963.50 or about $313 more than they would have paid for print alone. For that amount, they gained electronic access to their 5 journals plus 114 others. The average price of the journals was $928.45; for $313 they gained access to an additional $105,843 in titles.

The deal was not so attractive for the largest member of the consortium. Their existing subscriptions to ninety-eight titles amounted to $84,911. If they kept their print journals, their costs for IDEAL came to $16,133, and they gained access to twenty-one new titles. Their inducement to join IDEAL through the consortium clearly was more for the electronic access than for the additional journals. IDEAL clearly is an excellent choice for a small library in a consortium. For a large library, the cost is much greater and the benefit less.

Project Muse

Johns Hopkins University Press was a pioneer in offering its journal list electronically to libraries in a program called Project Muse. An early offer gave libraries the opportunity to purchase journals electronically at a small discount from the paper price, but it also enabled libraries to have both paper and electronic forms of journals for a small premium. Later, Project Muse entered into more complex consortial deals that enabled libraries to have electronic access to the entire journal list at a greater discount.

Project Muse is criticized, like IDEAL and other single-publisher electronic journal databases, for its content. Because the journals range over a variety of subject areas and often are not the leading journals in those areas, Project Muse is not an obvious place to begin for very many searches.

In June 1999, Project Muse announced that nine additional university presses were joining the program with more to follow. Many libraries had joined Project Muse more for its uniqueness and inconsiderable expense than for its usefulness. As its usefulness and expense increase (for those who pay for the additional publishers' journals), librarians at less wealthy institutions will have to face the familiar question of how much more to pay for one of many useful products.

PEAK and ScienceDirect

As befits the largest publisher of scholarly journals, Elsevier, too, offers an electronic database of its journals. John Haar (1999) describes Vanderbilt's experience with PEAK, an experimental project that offered Elsevier journals electronically to participating universities. At the time of the experiment, articles from 1996, 1997, and 1998 were available electronically. Vanderbilt chose a plan that required an entry fee for the right to view Elsevier's 1996 articles plus free access to all of the Elsevier journals to which Vanderbilt subscribed in paper. In addition, Vanderbilt purchased tokens, each of which would give a Vanderbilt user access to one article from an Elsevier journal published in 1997 or 1998 and not among Vanderbilt's paper subscriptions. As part of the experiment and as a justification for the low cost, Vanderbilt had to predict the number of tokens needed. They were not allowed to purchase more as needed or return unneeded tokens. An article purchased by token, however, did not have to be purchased again if there was additional demand for it.

Vanderbilt held subscriptions to about 403 of the 1,175 journals in PEAK. Beyond their entry fee of $19,000 they paid $24,660 for 5,400 tokens or $4.57 each. This compares to Elsevier's normal undiscounted charge of $30 per article. Haar estimates that Vanderbilt's cost per Elsevier article for their print subscriptions at the time of the experiment was $8.32.

Although Vanderbilt's experience with PEAK was only during a transitional fourteen months, two conclusions seem clear: (1) purchasing per

article at these reduced prices is cheaper than subscribing to journals; and (2) purchasing per article is a far more direct way to connect users to material than through subscriptions. For, at Vanderbilt, there was actually more electronic usage of journals outside their subscription list than of those to which they subscribed in print. Haar found that the average article consulted by patrons was consulted 2.7 times. On the other hand, 98 percent of the articles were never used. Haar (1999) reports as a consequence: "People do not read journals; they read articles."

ScienceDirect is an Elsevier offering to libraries that incorporates many of PEAK's features. It, too, offers access to Elsevier's 1,100 or so periodicals, and it plans eventually to go back to 1992. Like Academic's IDEAL, Elsevier's ScienceDirect bases its charges in part on the Elsevier print subscriptions held by the library. For that charge, the library not only attains electronic access to its print journals, it also gains access to Elsevier's entire list. However, after a quota of free downloads of articles from journals to which the library does not subscribe, the library must pay a price per article that normally is considerably more than PEAK's $4.57 but likely substantially discounted from Elsevier's $30 per article charge. The quota of free downloads is based on a percentage of the total cost of print subscriptions.

To prevent libraries from canceling Elsevier print periodicals to pay for ScienceDirect, the program penalizes libraries for print cancellations (under IDEAL, Academic Press similarly continues to charge 90 percent of the print subscription price without regard to whether the subscription has been canceled).

As Vanderbilt discovered with PEAK, ScienceDirect is a very valuable service for libraries. Objections, like those to Project Muse and IDEAL, include the argument that many Elsevier journals are not first tier. However, ScienceDirect provides a much more considerable database than either of these other services. Although both IDEAL and ScienceDirect in my experience prefer three-year deals, there is the fear that dependence will grow on a product that may become too expensive over a longer period of time, and that alternatives will be bleak if one drops the program. Finally, ScienceDirect, unlike Project Muse and IDEAL, threatens less privileged users. When Vanderbilt began PEAK, undergraduate students were excluded from access to unsubscribed journals for fear that per-use costs would be too high. That turned out not to be the case at Vanderbilt and other libraries participating in PEAK, and Vanderbilt initiated full student access after a couple of months. Nonetheless, it is likely that libraries with less developed print lists of Elsevier journals than Vanderbilt and its peers will exhaust their quotas of free articles and move on to pay for each article downloaded. Such libraries will be tempted to confine the usage of electronic articles from unsubscribed journals to their faculty and possibly their graduate students. As increased costs for electronic products lead

logically to reduced collections or the elimination of paper journals, the unprivileged user is vulnerable to actual reduced access arising from the purchase of products such as ScienceDirect.

LEXIS-NEXIS Academic Universe

LEXIS-NEXIS Academic Universe came to a multitude of American libraries as the result of the largest multi-consortial deal of its kind for an electronic database. Although the savings may not have been as great for large academic libraries because costs are based on full-time-equivalent (FTE) enrollment, smaller libraries received huge discounts from earlier charges. An 8,000-student university subscribing to Academic Universe's telnet predecessor with the right to only one simultaneous access paid half again more for that single access than it did for the consortial deal that granted unlimited Web access to the entire community. And if any users preferred the telnet access, that was thrown in free. In this case, the library saved $7,000, added a more user-friendly search engine, and almost infinitely expanded access.

In spite of the deal's manifest merits, librarians have found cause to complain about the product. Academic Universe offered a large number of different products from different vendors, some of which individually cost as much or more than the discounted price for the entire database. Some of these products began dropping out of the database until Academic Universe offered far less than it originally had. At one point, the price was lowered for the reduced coverage, and in the latest contract, LEXIS-NEXIS guarantees that databases of equivalent size will be substituted for any that are dropped.

Most libraries still find Academic Universe a desirable product at its price. As its strengths have decreased, however, libraries that made plans to depend on some of the original offerings at their irresistible price may regret their original decision because of the fluidity of the database's contents and other changes that make its purchase far more debatable than it was.

netLibrary

Most full-text Web databases offered to libraries focus on journal articles or reference sources. One notable exception is netLibrary, which offers Web-based full-text access to books with circulation modeled after a conventional print library. (Their electronic books [eBooks] actually circulate just like print books; if someone in a library has an eBook checked out, another patron in that library must wait until it is "returned" before using it. The library can buy multiple copies of eBooks to overcome this problem.) Like most electronic vendors, netLibrary negotiates prices, but basically libraries purchase electronic titles at approximately the same discount as their print counterparts. However, in addition to the initial cost, after the first year the library pays an access fee that can be as high as 50

percent for perpetual access, less for annual access. Purchasing titles through netLibrary is not ordinarily a way of getting cheaper-than-print electronic access to books.

Electronic books offer several advantages over print. There are no local storage costs; barring hacker mischief, they cannot be stolen, lost, misshelved, or mutilated; and they should not deteriorate with time. In addition, they can be accessed without going to the library. These are major advantages, but perhaps none is as great as an additional one: the ability to search the eBook text electronically.

The eBook also has disadvantages. Walt Crawford and Michael Gorman (1995) have argued persuasively that the computer screen will never rival the printed page for reading comfort (pp. 13-35), and the experience of most readers endorses the argument against reading full books from computer screens. Because of the desire to protect copyright and book sales, printing the books is deliberately made cumbersome. If the reader manages to print the book for reading by printing it screen-by-screen, the cost of the book has risen again. It would not take many printings to equal the cost of most books; moreover, the putative saving of forests through the use of electronic products disappears with the first reader's printing and achieves a growing negative balance with each additional one.

AMIGOS, the bibliographical utility of the American southwest, has arranged for approximately ninety libraries to purchase between 9,100 and 13,000 eBooks. The libraries will have rights in perpetuity to these books, but they will have to share each title with each other. Among the eBooks, some duplication is expected so that one copy of a popular title will not have to be shared by all. Prices vary by size of library, but an average-sized academic library will pay less than $1.00 per title. For print books, such sharing obviously would lead to extreme user frustration. In our postmodern electronically-based times, it could be argued that very few library users read an entire book carefully. Especially if the book is purchased electronically only, the reader may find the parts she wants through electronic searching and quickly terminate her need for the title. Although AMIGOS has not established circulation periods as of this writing, they will likely be very brief compared to traditional circulation periods for the printed book.

Criteria for Selection

Traditional Selection Criteria

Before the electronic revolution, Richard Gardner (1981) published a respected book on library collections. In it, he begins his section on selection (pp. 179-99) with a discussion of "demand versus value or quality" in which he argues that selectors must make some compromise between the two sides. Despite his advice to compromise, he clearly favors the quality side over the demand side of the argument.

Gardner follows his introductory remarks with a list of criteria for judging materials (pp. 185-86). His list of eighteen criteria is arranged so that similar criteria are together, but he does not separate the criteria by groups. For clarity, the criteria are grouped and named here: quality (authoritativeness, accuracy, impartiality, recency of data, adequate scope, and depth of coverage), library relevancy (appropriateness, relevancy, and library potential), aesthetic and technical aspects (interest, organization, style, aesthetic qualities, technical aspects, physical characteristics, and special features), and cost.

Quality was a controversial area when Gardner wrote, and it still is twenty years later. Authoritativeness is still valued, but postmodernists and feminists have seriously weakened the concept of authoritative or canonical works. Accuracy, particularly in scientific works, also still holds value, but once again postmodernists and many feminists would question the very concept and, beyond that, question its importance. Impartiality was already under fire in the protest era preceding Gardner's book as protestors questioned the impartiality of official government statistics. Postmodernists and feminists again question impartiality as they find ideology everywhere in the written and spoken word. Even librarians who disregard postmodernist arguments recognize the importance of adding partial and biased works to the collection in order to represent diverse opinion.

Recency of data was and is extremely important in science and the social sciences. Clearly, recency is unimportant when older data have not been superseded. In the humanities, older data might even be preferred to newer data. Perhaps the pace of change in the sciences, social sciences, and humanities has accelerated over the last twenty years, but the preference for new data when recency is relevant remains the same. Adequate scope and depth of coverage, the last two elements in Gardner's list of criteria, also are as relevant today as they were when he listed them.

The importance of library relevancy (appropriateness, relevancy, and library potential) approaches a tautology. Only a rare selector would seek out the inappropriate, the irrelevant, and the material lacking potential use for the library. Gardner's (1981) explanatory questions (pp. 185-86), consequently, have to be relevant to selectors today: Can the user comprehend the work? How suitable is the medium for the subject's presentation? How frequently will the work be used? The question for us is whether these questions mean the same thing today. Users today might expect "dumbing down" that would not have been tolerated twenty years ago. And the choice of media for a subject's presentation is incomparably richer than it was in 1980.

Gardner's list of aesthetic and technical aspects (interest, organization, style, aesthetic qualities, technical aspects, physical characteristics, and special features) includes more criteria of great relevancy today, but

the applications of his explanatory questions have changed dramatically. Imagine the answers in the electronic age to questions about the faithfulness of the illustrations to the original, the clarity, the typeface, the attractiveness of the packaging, the "genuine artistic experience," and the durability of the physical piece.

Cost is the last of Gardner's criteria. It would seem an obvious criterion to most librarians struggling with budgets that are inadequate to provide for the purchase of the never-ending flow of desirable information products. But some librarians, inspired perhaps by the successes of state projects such as OhioLINK and GALILEO and concerned by the mass of inchoate information available on the Web, assert that money is a decreasing concern in the business of selection. They believe that the information is there; the business of the librarian is to discover and organize it.

"By the Drink" Versus "The Kitchen Sink"

Some basic criteria for selection have hardly changed since before the popularity of electronic information. Librarians continue to collect materials with adequate scope and depth of coverage that are relevant to their communities of users. Other criteria remain valid in concept but have changed markedly in application. Cost questions and differences in physical characteristics have evolved from relatively simple comparisons to a labyrinth of considerations. To some degree, however, there are entirely new questions for librarians in the electronic world. The most notable of these has been characterized as "just-in-time versus just-in-case." This formulation may be inadequate to describe the strong but opposite new opportunities for librarians in collection development. The opportunities that have presented themselves with great force in the last ten to fifteen years have been "by-the-drink," a near equivalent of "just-in-time," and "the kitchen sink," which is not quite the same as "just-in-case."

To purchase "by the drink," as Vanderbilt has discovered, seems to be the most economical and direct way to purchase materials for a university community. If the Vanderbilt experience can be universalized, libraries are purchasing a tremendous amount of unused journal literature. At the same time, they are missing an almost equal amount of useful journal output. A system offering superior indexing of periodicals and allowing for the purchase of articles as they are needed would seem to be ideal. In the PEAK experiment, an article once purchased by a library became available for subsequent users at that library. There is no reason, unfortunately, to believe that future "by the drink" schemes will allow the purchase of an article for one user in a library to suffice for all. Publishers normally prefer to restrict multiple usage of articles as much as they legally can. ScienceDirect, Elsevier's product that is very similar to the PEAK experiment, allows subsequent use of an article for only forty-eight hours.

"By the drink" purchasing of articles by libraries carries with it latent liabilities. It calls into question the necessity of librarians as mediators of information, and it violates the traditional model that has librarians determining the information needs of the community and libraries providing it. Cutting-edge librarians will, of course, not be concerned by new and perhaps risky modes of existence for libraries and librarians. What might be lost in the new model, unfortunately, is equal access to information for all people. In the traditional academic library, except for disparate circulation periods for faculty as opposed to students, the lowliest student had almost the same access to materials as professors. In "by the drink" scenarios, faculty members and graduate students often are the only members of the community who are allowed automatic purchase. In traditional libraries, the nature of the material determines what is supplied. When libraries purchase according to request, the status of the requester will normally take precedence (Holleman, 1996, pp. 56-58).

Defenders of a switch in library paradigms to on-demand purchasing will likely argue that libraries can purchase articles on demand for all of their users at the same cost or less than they paid for subscriptions. In our present transitional period, this seems often to be the case. Two economists conclude that "the firm which uses a fixed subscription fee per period tends to do slightly better than a firm which charges on a per-hit basis" (Fishburn & Odlyzko, 1999, p. 469). If publishers make more money with subscriptions than with charges per hit, would not libraries save money by paying per hit? There are too many unknowns to answer the question of which scheme will cost more in the future. Most observers of publisher behavior believe that new pricing will ensure at least as much income as the old, regardless of scheme.

Whatever the outcome of pricing, librarians who allow members of their community to incur costs by purchasing any articles they want from vendors will be vulnerable to painful problems not unlike those surrounding high journal prices. Although anecdotal evidence cuts both ways on the question of total costs, there is no question that wasteful purchasing will take place if unsophisticated users choose whatever they like. It is perhaps supportable to know that an ignorant and unfeeling, perhaps even sabotaging, user can easily charge hundreds of dollars in a sitting in an unconstrained "by the drink" environment. It is less supportable to know that the likely path to cutting costs in this environment if they become too high is to discriminate against users of relatively low status.

When vendors include all of their titles in a grand database, in the minds of some librarians it might be said that they have thrown in the kitchen sink. As a cliché, the kitchen sink symbolizes a worthless, unnecessary addition. Robert Michaelson (1999), for example, writes, "ScienceDirect is a device to enable Elsevier to make such profits forever, since the libraries and consortia foolish enough to buy into it have forever

committed themselves to supporting whatever Elsevier decides to publish, however overpriced, or mediocre (or worse) in quality." After OhioLink famously purchased full access to all Elsevier electronic journals for its member institutions, some librarians criticized the action because of the irrelevancy of many of the journals for many of the libraries and, like Michaelson, brought up the question of quality. Librarians from Ohio (Dannelly, 1999) vigorously defended their purchase, citing the array of materials made available and the cost-effectiveness of the arrangement. Like Vanderbilt, they report more than 50 percent of their use is of journals to which there is no print subscription on campus (OhioLINK, 1999, p. 5).

"Kitchen sink" products may be criticized for low quality, but very few library users are offended by having too many "low quality" Elsevier journals from which to choose. There exist a huge number of journals below the quality of Elsevier's worst journal in terms of editing and intellectual content. These non-Elsevier journals are the journals that the academic community might find offensive to sift through. Meanwhile, "kitchen sink" products such as Academic Press's IDEAL and Project Muse of Johns Hopkins University press have made available in many consortia and in many states large areas of previously unavailable content to users of relatively low status.

The future by no means offers only a stark choice between purchase "by the drink" and purchase of "the kitchen sink." Librarians are doing both now. In fact, ScienceDirect combines the two seemingly opposed concepts. ScienceDirect offers the "kitchen sink" in the sense that there is access to all of Elsevier's electronic journals. It offers "by the drink" when purchasers exceed their quota of free full-text articles from the Elsevier journals to which they do not subscribe. At that point, subscribers pay by the drink, albeit at a reduced price. The larger a library's subscription base, the more articles that library is entitled to receive. One suspects that usage statistics over time will indicate that some journals are cheaper by subscription, but that more are less expensive by per-use pricing. If per-use pricing indeed saves libraries significant funds, for-profit publishers will assuredly adjust their prices to preserve their profits. Meanwhile, nonprofit publishers at this early date have seemed on the whole less able than for-profit publishers to offer innovative and flexible schemes for access to their publications.

Marxism, Meet Capitalism

"From each according to his abilities, to each according to his needs." Karl Marx, we can be certain, never knew that he would be providing some of the allegedly most rapacious capitalists of the world more than 100 years in the future with a basic operating principle when he first expressed this ideal. Marx's emphasis lay on the second half of the slogan:

No one should take advantage of his own or others' labors to gain luxuries that he does not need. But Marx was also confident that, in a better society, people would not need excessive financial awards to work to the best of their ability.

Publishers seek to maximize income by getting the largest amount of money from subscribers best able to pay ("from each according to his abilities"). Sometimes this has taken the form of charging according to full-time-equivalent enrollment of students, sometimes according to total usage, sometimes according to the number of simultaneous uses desired, and sometimes according to how much an institution already spends on the publisher's print journals.

Charging according to total cost of print subscriptions is the purest adaptation of Marx's dictum. It is the publisher's effort to get money according to the buyer's ability to pay. This charge is normally accompanied by penalties for print cancellations, or at least by a policy that will not lower electronic costs if print journals are canceled. It, however, can be an unfair measure as institutions with the largest lists of print subscriptions may not be the biggest users of a publisher's journals, and over time they may no longer be the most able to pay. Though the policy is a clear attempt to gain maximum income by finding a way to charge as much as a library can afford, it carries with it not only the shortcoming of unfairness but also the difficulty that the ability to pay shifts among libraries as time passes. Publishers may someday have to change or adapt this increasingly common pricing structure.

For the selector, unpredictable pricing futures make decisions riskier. Today's decision to divert money to electronic journals based on today's pricing may mean money wasted on temporary access and gaps in the print collection if publishers find that they have to change the nature of electronic pricing in the future.

Postmodernism, Print, and Quality

Scholars routinely point to the contribution of electronic technologies toward the coming of postmodernism. Postmodernism is not easily defined, but it is most easily understood in distinction to modernism. In modernism we had great authors, like James Joyce, using and transforming the works of the great authors of the past but also transforming with his genius the materials of everyday life. Modernists recognize great works and superior genius; a very high number of the works that they judge to be superior happen to be from the western world and a high proportion of their geniuses happen to be male. That is the starting point of the postmodernists' dissent.

Postmodernists do not concede the superiority of the modernist's geniuses. Where a modernist author parodies, Fredric Jameson (1988) argues that a postmodernist uses pastiche (pp.15-16). Parody implies

standards, or good and bad. Pastiche only tells its audience that something is there. Parody believes that it understands; pastiche just takes and looks. Parody was well served by the print age; the electronic image is perfect for pastiche.

In print culture, students were encouraged to read and re-read great works. In Alvin Kernan's (1999) words: "Literature was considered a revelation of the deep workings of the human mind, a ritualization of permanent truths about the human condition . . ." (p. 233). In electronic culture, there is little pretense about superior works or the need to understand dense, profound structures of expressed thoughts. Again, in Kernan's words: "The TV image is direct and uncomplicated: what you see is what you get" (p. 233).

Postmodernism is not a much beloved movement or phenomenon. Charles Lemert (1997), an apparent postmodernist himself, concedes that the word is seldom used in an approving way (p. 6). Similarly, people commonly regret the ascendancy of electronics over print, even as they acquiesce in the decision to purchase electronic rather than print products.

Print implies quality in a way that the electronic image does not. The provision of quality has been a standard in the vision for every traditional academic library collection, and protracted arguments on the liblicense-l listserv (liblicense-l@lists.yale.edu) indicate that the concern lives on today. Electronic products by their nature are easily grouped together in massive combinations for purchase; they are easily published when editing is not in the equation; many of them can easily be disseminated at no cost; and the cost of storage of huge electronic documents is negligible. All of these factors make it inevitable that selectors cannot be as concerned about quality in an electronic age as they were in the age of print.

Even if our age considers quality an ambiguous and even dubious concept and even if electronic products encourage librarians to discount its importance, quality, or something very like it, still is taken for granted as a matter of some importance in higher education. Students seek to enter institutions with high quality programs, and parents pay considerable amounts of money to send their children to such institutions. Scientists, in particular, often invoke the concept of quality without a sense of irony. Psychologists, as well as scientists, believe that some journals are of high quality and that access to others is unimportant for themselves and their students (Holleman, 1996, p. 61).

Librarians may sometimes lose sight of the fact that an unpopular journal is not necessarily one of deficient quality; it may simply cover a topic of narrow interest. "Kitchen sink" products that make available journals in low demand at an institution do not necessarily make products of low quality available to the library's users. But academic librarians legitimately concern themselves over the low quality of the products that

aggregators of titles can supply. If it is true that students and other users will often prefer what is most easily accessed, an easily-accessed aggregated electronic product will encourage the use of its own titles without regard to quality. To the degree that the quality of the electronic product's titles often is not first-rate, students will fail to read the best material on their subject and settle for the second-rate.

Criteria: The Context Changes

All of Richard Gardner's criteria for selection in 1981 are relevant to a greater or lesser degree today. The four basic criteria (quality, library relevancy, aesthetic and technical aspects, and cost) to which we have reduced them remain the four basic criteria for selection. But over time the meanings of some of these concepts have changed, and the context in which they operate has changed markedly.

Librarians frequently want simplified criteria to supply answers to the complex and difficult selection questions facing them. The criterion such librarians most frequently choose is library relevancy, which they in turn simplify further to mean popularity with users. The cases chosen for this study illustrate how difficult it is to choose a single criterion, and they further illustrate how all four criteria interrelate in selection decisions. Project Muse may cause librarians selection problems from rising quality and rising prices; Academic Universe from declining quality and price. IDEAL and ScienceDirect raise technical questions that have not been addressed in this discussion as well as questions of quality, library relevancy, and cost.

The evaluation of most products by any of the four criteria is more difficult than is commonly admitted. The concept of quality is controversial. Library relevancy as defined by usage takes time to establish, especially if a product is not properly introduced and publicized. Even if usage is established, the appropriateness of a product for an academic community can be in dispute. Technical aspects of a product can be very difficult to determine. Both TexShare and IDEAL were substandard when they first reached Dallas. This was difficult to predict before their appearance, and if libraries had canceled their subscriptions based on the early problems, they would not have profited when the problems were fixed.

Cost as a selection criterion has certainly changed markedly, as the practice of aggregating titles has grown and as deal making has correspondingly increased. More than was conceivable in the past, librarians find themselves being offered products of the highest quality, relevance, and aesthetic and technical appeal that nonetheless are close to unaffordable. The aggregated electronic products, however, are not unlike the print journals in the type of cost difficulties that they offer. The decision to purchase one is ideally a commitment for the future. In the long run, a three or four year run of a journal is next to useless. In the

long run, a huge outlay over three or four years for an aggregated journal collection will have been next to useless if the library does not continue with the aggregator.

It is a commonly accepted truth that the rising cost of periodicals has been ruinous for academic libraries. It is perhaps less commonly seen how the increasing opportunities for electronic information require librarians similarly either to raise significant additional funds or neglect highly useful products. One unfortunate development in electronic pricing has been the imitation of the journal-pricing paradigm. Whereas microform products of the past could be purchased with one-time money, these same products and types of products are now frequently being placed on the Web and, like journals, priced annually. In one regard, the pricing structure for Web products is worse than the traditional one for journals: If a library ceases to pay, it has nothing to show for the years of expense.

Librarians today may use basic criteria for selection similar to those of the past, but their task of selection is more complex and more difficult. Questions of quality and relevance intermingle as they always have, but electronic solutions and philosophical attitudes make it easier to abandon quality than ever before. Technical decisions are far more difficult than in a simpler time. Electronic products can and do improve; they can and do deteriorate. Decisions based on technology consequently are often regretted. Cost decisions are clearly harder than ever. Initial pricing of products may be misleading, and large sums of money may be devoted to a product that will have to be abandoned later with no residue of benefit from the expenditure.

Conclusion

Selection decisions in libraries are governed by the same basic criteria that have governed them for decades. The unvarying list of basic principles of selection does not mean, however, that there has been a lack of change in the selection process. The context, nature, relative importance, and even the meaning of some of the criteria have changed.

There is little doubt in the library profession about the importance of two of the criteria: library relevancy and technical aspects. Rare is the librarian who would argue that the usefulness of a title for a specific library is not relevant in the selection decision. Almost as rare would be the argument that inferior search engines and reliability of response are irrelevant in the selection of an electronic product.

Quality and cost are more controversial criteria, and these are not simple to apply. As they relate, for example, to a crucial issue—to purchase "by-the-drink" or to purchase the "kitchen sink"—it could be argued that quality and cost clearly favor "by-the-drink." By using this model, the library purchases only the best and most desirable of materials, not the full range of them. As for cost, both economic studies and the library's

experiences find purchasing by the drink cheaper. But are purchases by the drink necessarily going after materials that are as high in quality as materials chosen for collections? And do the lower costs of purchasing by the drink reflect the needs of the potential user disenfranchised either by her low rank or by a reluctance to incur for the library the cost of purchasing unowned material just for herself?

In the electronic age, there are immense pressures on librarians to abandon their selection principles. There is the pressure to abandon print in order to be proactive about the future; there is the pressure to stop collecting and respond only to demand, when the significance of the demand is usually at least partly defined by the status of the demander; and there is the pressure to purchase collections of materials aggregated by vendors without regard for the needs of individual libraries.

These pressures have been intensified by the stunning variety of materials available for libraries, all of which libraries have good reason to purchase. Arguments can be made against aggregations of library materials by publishers such as Academic Press, Elsevier, and Johns Hopkins University Press, but their aggregated products have immensely improved what most purchasers have been able to provide to their communities. Arguments can be made in favor of print or electronic media, but having both is better.

Electronic periodicals and books give readers searching abilities that were impossible in a print environment. Print books are the best medium for sustained study and reading, for depth of thought and complexity of argument and, so far, along with print periodicals, they have seemed preferable for archival purposes. Print products also are widely believed to be preferable to electronic for serendipitous discovery. It can be argued that electronic products bring a different kind of serendipity or an ability to discover that is superior to serendipity. The proposition that electronic products offer the same serendipitous discoveries as print, however, is hardly plausible, and it is especially certain that in a "by the drink" environment serendipity is reduced.

Selection decisions are not easy. Purely electronic products may be the answer in one discipline, and a mix of print and electronic in another. "By the drink" purchasing likewise may serve a discipline little given to serendipitous thinking, while "the kitchen sink" approach may best serve another. Often the selector will have to compromise ideal solutions because of cost. Of one thing we can be certain: Selection decisions will have to be made, and cost will play a major role in what selectors choose to purchase. If librarians are to make good decisions, they will make them using selection criteria that closely resemble the criteria of the past. If they fail to acknowledge that they are making selection decisions and let circumstances thrust their outcomes upon them, their library collections and services will suffer accordingly.

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